

Appln. No. 10/802,194

Attorney Docket No. 10541-1989

I. Listing of Claims

1. (Currently Amended): A heat exchanger assembly for motor vehicles, whereby the air to be heated can be additionally heated by a refrigerant circuit operable as a heat pump or short circuit to provide ~~for~~ additional heating, said assembly comprising:

a heating heat exchanger ~~in a coolant circuit~~ having a plurality of coolant tubes connected to a coolant collector region in a coolant circuit and wherein the plurality of coolant tubes have a heat exchanging surface for exchanging heat between a fluid circulating in the coolant circuit with the air to be heated; and

a gas cooler/condenser having a plurality of refrigerant tubes connected to a refrigerant collector region in a refrigerant circuit having a first heat exchanging surfaces for exchanging heat between a refrigerant circulating in the refrigerant circuit with the air to be heated ~~the additional heating operation and second heat exchanging surfaces for the cooling plant operation of the refrigerant circuit,~~ and

wherein the refrigerant collector region is partly surrounded by the coolant collector region, and

wherein the plurality of coolant tubes are arranged in a first row and the plurality of refrigerant tubes are arranged in a second row, the plurality of refrigerant tubes being arranged after the plurality of coolant tubes in a direction of the passing air to be heated.

2. (Cancelled).

3. (Cancelled).

BRINKS
HOFFER
GILSON
& LITONE

Appln. No. 10/802,194

Attorney Docket No. 10541-1989

4. (Original): The assembly of claim 3 wherein said coolant tubes and said refrigerant tubes are arranged next to each other and are parallelly passed by air.

5. (Original): The assembly of claim 4 wherein said coolant tubes and refrigerant tubes are arranged alternating next to each other.

6. (Cancelled).

7. (Withdrawn): The assembly of claim 1 further comprising a collector unit having a coolant region and a refrigerant collector region, whereby said refrigerant collector region has no common boundary surface with said coolant region and is arranged thermally separated of it outside of the coolant collector region.

8. (Withdrawn): The assembly of claim 7 wherein alternately, partly instead of coolant tubes, refrigerant tubes are arranged comb-like in a row of the heating heat exchanger and the refrigerant collector regions are connected over connection tubes to the refrigerant tubes and because the refrigerant collector regions are arranged outside of the coolant collector region the resulting comb design realizes a good thermal separation of the coolant circuit and the refrigerant circuit.

BRINKS
HOFFER
GILSON
ELTONE